

Pilot Test Exercise

INSTRUCTIONS: This is NOT a TEST.

You will be asked a technical question and asked to solve it.

Please, literally, think out loud as you actually solve the problem, and complete the answer as if no observers were present.

Thinking aloud enables us to refine the wording of the question.

Subject Matter Expert _____

Component/Process Vibration in the seeker

Date 10/16/00

To obtain an evaluation of the percent effectiveness of the *Really Deadly Missile System*, we are asking you to provide your expert judgment regarding its components, processes, and subsystems. The design engineers for the seeker in the really deadly missile system have identified the following sources of vibration affecting its performance.

1. Manufacturing
2. Truck transportation from production facility to storage and from storage to launch area.
3. Loading and unloading using forklift to and from truck including potential drops.
4. Launching
5. Flight

As you solve the problem, please think aloud.

Vibration specification is ability to withstand *xx* amount of impulse (in Hz) for *yy* amount of time without any displacement.

Assume that the seeker is stored in a zero vibration environment and that all vibration is accounted for by the five sources listed (i.e., these five sources sum to 100%).

1) Please provide your best estimate for the percentage contribution due to truck transportation, excluding forklift and drops (source #2):

_____ % best estimate

2) Please provide a range for that percentage (e.g., a best case and a worst case percentage value)

_____ % best case

_____ % worst case